Bridge Study Goals

- Evaluate how proposed ROD flows affect each bridge
- Identify concepts to address weaknesses at bridges in their ability to pass ROD flows
- Consider in conceptual designs possibility of safely passing Maximum Dam Controlled Release, 50-yr & 100-yr flood events

GENERAL PROCEDURE TO DETERMINE FLOWS AT BRIDGE LOCATIONS

- Identify Discharge from Lewiston Dam Under ROD
  - Determine 50/100 yr inflows to Trinity Dam
  - Identify dam operations (water supply & SOD)
  - Identify tunnel operations
  - Incorporate ROD flows & possibility for 13,750 cfs maximum controllable release from dam
- Determine 50/100 Year Flow from Tributaries
- Combine Lewiston Dam Releases & Tributary Inflows at Bridge Locations Based on Season

Discharges at Bridges, Full Implementation of ROD

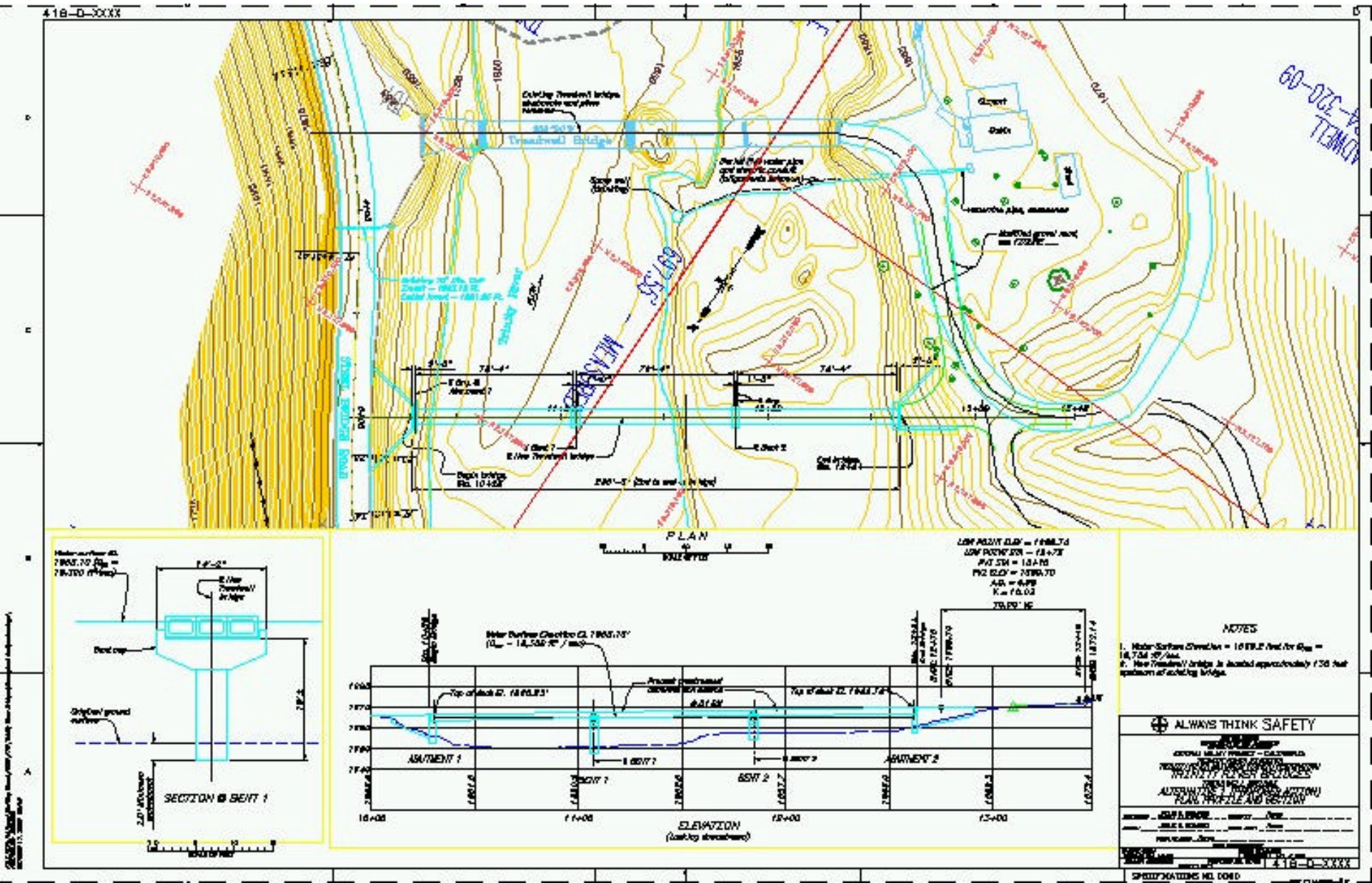
Date	Salt Flat Bridge	Bucktail Bridge	Poker Bar Bridge	Treadwell Bridge
100 yr Winter	12,400	12,700	22,700	23,900
ROD flows Spring	11,700	11,700	12,400	12,500
Design Flows 50 yr*	11,700	11,700	18,500	19,100

* Low chord set at 50-yr water surface elevation plus 2-ft of freeboard

Treadwell Bridge

- Privately owned, four span, L = 201 ft
- Single lane, 14 ft clear width
- Railroad flatcar with timber decking
- Abutments and piers founded on rock
- Overtopped during 1/1/97 event
- Can pass 9,000 cfs, no freeboard
- Water surface elevation near top of deck during simulation of proposed ROD flows

Treadwell Bridge Upstream




Treadwell Bridge
Estimated Cost = $745,000
VE Concept (looking upstream)
(Cast-in-place box girder structure supported
on 3'-0" diameter bents)

Bucktail Bridge

- County road bridge
- Single 76 ft long span, two lane 32 ft wide bridge & road
- Steel beam with concrete deck
- Steel pile foundation
- Road west of bridge overtopped during 1/1/97 event
- Bridge passes proposed ROD flows
- Second span & raised road
- Estimated cost = $400,000

Bucktail Bridge Con-Span

Poker Bar Bridge

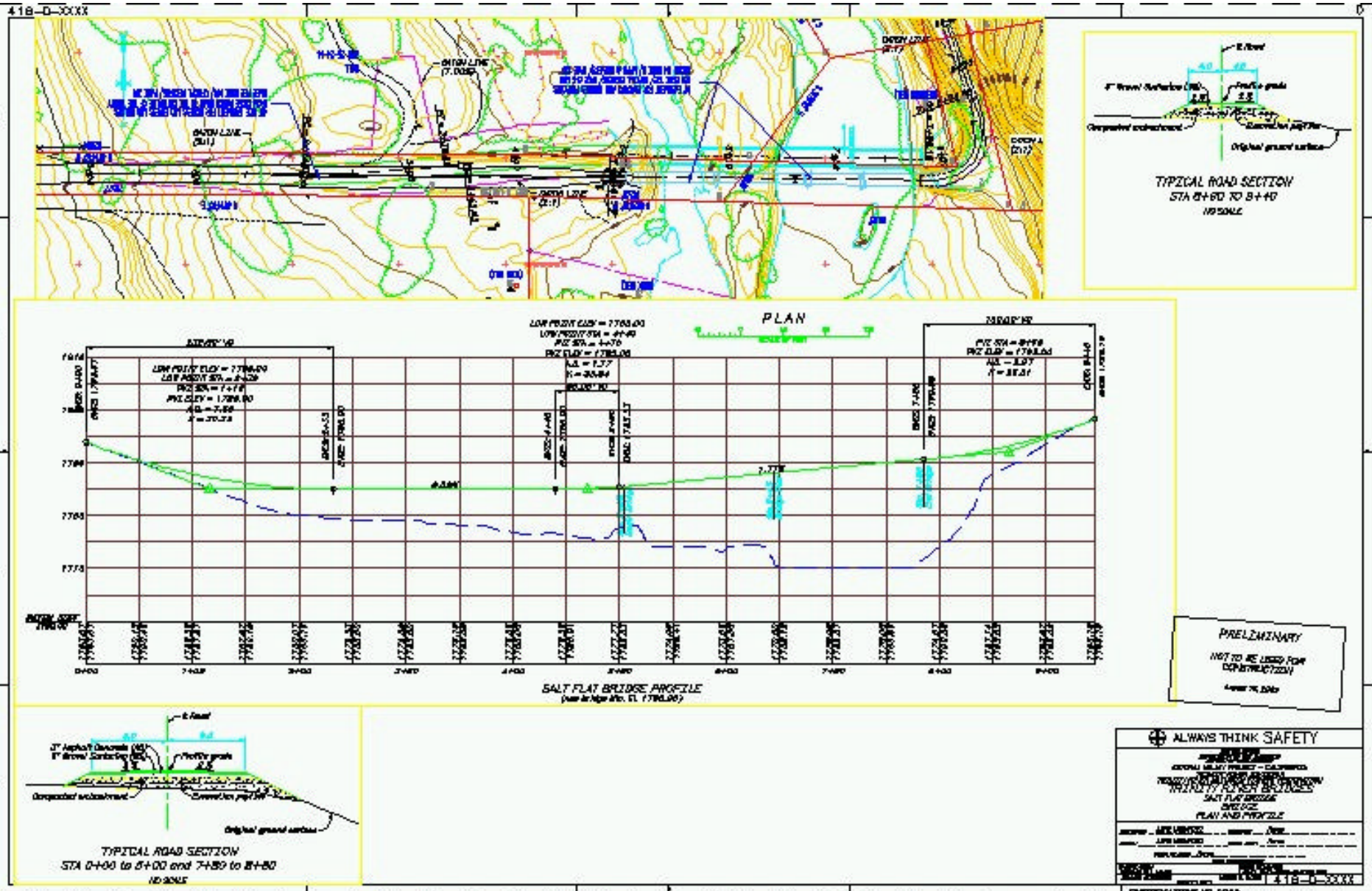
- Privately owned
- Two bridges, 52 feet and 87 feet long
- Double lane, 18 ft clear width
- Railroad flatcar with timber decking
- Steel pile foundation
- Road overtopped during 1/1/97 event
- Bridges pass proposed ROD flows


Poker Bar Bridge (left channel)
New bridges, upstream of existing bridges
Raised Poker Bar road
Estimated cost = $1, 175,000
Concept 3 (looking downstream)
(New bridge, upstream of existing bridge)

Salt Flat Bridge

- Privately owned, four span, L = 274 ft
- Single lane, 8 ft clear width
- Railroad flatcar with steel or timber decking
- Steel pile foundation
- WSE above low chord during 1/1/97 event
- Can pass 7,500 cfs, no freeboard
- WSE above low chord during simulation of proposed ROD flow

Salt Flat Downstream



Salt Flat Bridge

- New bridge
- Raised Salt Flat road
- Estimated Cost = $1,350,000

- Contract Award for Bridges - May 2003
- Construction Complete - May 2004